International Journal of Medicine and Pharmaceutical Science (IJMPS)
ISSN (P): 2250-0049; ISSN (E): 2321-0095
Vol. 8, Issue 1, Feb 2018, 45-52.

STUDY TO ASSESS THE EFFECTIVENESS OF BEHAVIOUR CHANGE COMMUNICATION PACKAGE ON REPRODUCTIVE TRACT INFECTION AMONG WOMEN RESIDING IN RURAL COMMUNITY AREA- KUNDRATHUR, CHENNAI.

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ABSTRACT

A True experimental study was conducted to assess the effectiveness of Behavior change communication package on Reproductive Tract Infection among reproductive age group women, in a selected village under kundrathur PHC, Chennai, Tamil Nadu. Door to door survey was conducted for a period of 1 year and 3 months in Kundrathur A total of 1154 women in the age group of 18 to 45 were identified with RTI. Then, women were allotted for study group and control group by simple random method. Pretest was conducted with a structured knowledge questionnaire on RTI, and then, implementation of behavior change communication package was administered to only study group and routine measures for control group. Reinforcement was given for only study group at 2nd month and 4th month. Post test was conducted for both the groups at the end of 2nd month and 6th month. The findings showed that during post test, there was a significant improvement among study group than control group at p< 0.001 level

KEYWORDS: Women, Effectiveness, Reproductive Tract Infection, Knowledge& Behavior Change Communication Package

Received: Oct 27, 2017; **Accepted**: Nov 17, 2017; **Published**: Jan 05, 2018; **Paper Id.**: IJMPSFEB20187

Original Article

INTRODUCTION

The WHO estimate 448 million new STI/RTI occur annually among adults aged 15-49 yrs.[1] World Bank estimates that STI/RTI (excluding HIV) account for 8.9% of disease burden among women, aged between 15-45yrs.[2] RTI range from 39% to 84% in India[3]. Women are reluctant to seek medical treatment, because of lack of privacy, lack of education and less female doctors, cost of treatment and their substantial socioeconomic status.[4] Women are at a greater risk of RTI than men because of physiological, cultural, social, economical factors. Females are less likely to seek treatment even for symptomatic infections, because of stigma with RTI.[5]

Despite the significant statistical figures, global burden of disease study estimated that, 27.4% of disability adjusted life years lost in Indian women aged 15-44 years was attributed to reproductive ill health. One third of women i.e. 29.15% had experienced one symptom of RTI in the past one year, in the selected under privileged slum in Bangalore city. Only 45% women had sought the treatment, most of them lack knowledge on

RTI symptoms and its prevention[6]. Research studies about Knowledge, Attitude and practice on RTI quoted that among married women, RTI was observed to be high, but their health seeking behavior was poor. They lack knowledge and attitude to practice preventive and curative strategies to combat RTI. Hence, the researcher decided to enrich the married women about causes prevention and management of RTI, through behavior change communication package intervention.

OBJECTIVES

- To determine the effectiveness of Behavior change communication package on RTI symptoms, and knowledge regarding reproductive tract infection among married women, compared with control group
- To associate the selected background variable with RTI symptoms and knowledge among married women in study group and control group.

RESEARCH METHODOLOGY

DESIGN

Pre test - post test control group experimental design was adopted and villages taken as unit of randomization. Setting: Study was conducted in selected villages under kundrathur PHC. Out of 19 villages, 6 villages were randomly selected: 3 for control group and 3 for experimental group.

SAMPLE

Married women between the age group of 18-45 years and residing in the selected settings with RTI symptoms for past 3 months

SAMPLE SIZE

180 married women were selected using cluster sampling; each group was allotted 90 married women. Sample size was estimated by using power analysis.

DATA COLLECTION

Institutional ethical committee approval for the study was obtained, and written permission from DDHS was availed before commencement of the research. The investigator obtained written, informed consent from the study participants before starting the study. Data was collected door to door in their residents with background variables, self reported RTI symptoms assessment check list and structured knowledge questionnaire on RTI. Content validity was obtained from experts and determined through CVI. Back ground variable and RTI symptoms check list was 0.867, knowledge tool = 0.936. Reliability of the tool was r= 0.77, r = 0.81, respectively.

Description of the intervention

BCCP was given to the study group by the researcher at their residence in 2 phases. Phase I was individual teaching on RTI, it included of RTI, causes, risk factors, mode of transmission, signs & symptoms, management prevention, complication of RTI. It was imparted through lecture cum discussion method using laptop; reinforcement was given in 2^{nd} and4^{th} month.

Phase II was individual counseling. It focused on compliance to treatment and safe sex practice. In second session, reinforcement session was carried out during 2^{nd} and 4^{th} month. Data was analyzed with descriptive and inferential

statistics with SPSS package.

MAJOR FINDINGS AND DISCUSSION

Table 1: Frequency, Percentage and Chi Square Distribution of Demographic Variables of Married Women in Study and Control Group. N=174

Demographic Variables		Group				χ^2 p value
		Experiment(n=86)		Control(n=88)		
		n	%	n	%	
Age	18 -26 years	36	41.9%	36	40.5%	χ^2=0.34P=0.84 DF=2 NS
	27 -35 years	28	31.4%	30	34.5%	
	36 -45 years	22	26.7%	22	25.0%	
Marital status	Married	63	73.3%	65	73.9%	χ^2=3.66P=0.16 DF=2 NS
	Widowed	13	15.1%	12	13.6%	
	Divorced/separated	10	11.6%	11	12.5	
Education	No formal education	6	7.0%	5	5.7%	χ^2=7.04 P=0.21 DF=5 NS
	Primary	16	18.6%	16	18.2%	
	Middle	16	18.6%	17	19.3%	
	High school	14	16.3%	15	17.0%	
	Higher secondary	24	27.9%	24	27.3%	
	Graduate or post graduate	10	11.6%	11	12.5%	
Occupation	Unemployed/housewife	40	46.5%	41	46.6%	χ^2=2.71P=0.60 DF=4 NS
	Unskilled worker	13	15.1%	13	14.8%	
	Skilled worker	16	18.6%	16	18.2%	
	Clerical/shop owner/farmer	10	11.6%	11	12.5%	
	Professional	7	8.1%	7	7.9%	
Family income	Rs.1601 - 4809	5	5.8%	6	6.8%	χ^2=6.17 P=0.29 DF=5 NS
	Rs. 4810 - 8009	24	27.9%	24	27.3%	
	Rs.8010 - 12019	20	23.3%	21	23.9%	
	Rs.12020 - 16019	25	29.1%	25	28.4%	
	Rs.16020 - 32049	9	10.5%	9	10.2%	
	> Rs.32050	3	3.5%	3	3.4%	
Type of family	Nuclear family	46	53.5%	47	53.4%	χ^2=0.57 P=0.75 DF=2 NS
	Joint family	37	43.0%	37	42.0%	
	Extended	3	3.5%	4	4.6%	
Previous knowledge	Yes	7	8.1%	8	9.1%	χ^2=0.05 P=0.82 DF=1 NS
	No	79	91.9%	80	90.9%	

Menstrual variables		Group				χ^2 p value
		Experiment (n=86)		Control (n=88)		
		n	%	n	%	
Age at menarche	10 - 11 yrs	12	14.0%	13	14.8%	χ^2=2.86 P=0.41DF=3 NS
	12 - 13 yrs	37	43.0%	37	42.0%	
	14 - 15 yrs	28	32.6%	29	33.0%	
	>16 yrs	9	10.5%	9	10.2%	
Regularity of menstrual periods	Very Regular	33	38.4%	34	38.6%	χ^2=0.64 P=0.88 DF=3 NS
	Regular	25	29.1%	26	29.6%	
	Somewhat regular	22	25.6%	22	25.0%	
	Very irregular	6	7.0%	6	6.8%	
materials used during menstruation	Sanitary pads	37	43.0%	37	42.0%	χ^2=0.46 P=0.79 DF=2 NS
	Cloth	49	57.0%	51	58.0%	
Obstetrical and Gynecological Variables						
Age at marriage	18 - 21yrs	62	72.1%	63	71.6%	χ^2=2.05 P=0.56 DF=3 NS
	22 - 25yrs	18	20.9%	18	20.5%	
	26 - 29yrs	4	4.7%	4	4.5%	
	>30yrs	2	2.3%	3	3.4%	
Age at first pregnancy	18 - 21yrs	59	68.6%	60	68.2%	χ^2=5.05 P=0.16 DF=3 NS
	22 - 25yrs	23	26.7%	23	26.1%	
	26 - 29yrs	2	2.3%	3	3.4%	
	>30yrs	2	2.3%	2	2.3%	
History of recent delivery within 1 yr	Yes	33	38.4%	34	38.6%	χ^2=0.41 P=0.51 DF=1 NS
	No	53	61.6%	54	61.4%	
Nature of Delivery	Normal	18	20.9%	19	21.6%	χ^2=3.02 P=0.39 DF=3 NS
	Assisted	10	11.6%	9	10.2%	
	Operated	6	7.0%	7	8.1%	
	Not applicable	52	60.5%	53	60.1%	
History of Abortion	Yes	22	25.6%	25	28.4%	χ^2=0.17 P=0.67 DF=1 NS
	No	64	74.4%	63	71.6%	
Nature of Abortion	Spontaneous	7	8.1%	8	9.1%	χ^2=3.44 P=0.32 DF=3 NS
	Legal	8	9.3%	9	10.2%	
	Illegal	7	8.1%	6	6.8%	
	Not applicable	64	74.5%	65	73.9%	

Sexual History and Family Planning Practice		Group				χ^2 p value
		Experiment(n=86)		Control(n=88)		
		n	%	n	%	
Type of sexual relationship	Monogamy	78	90.7%	79	89.8%	χ^2=1.53 P=0.21 DF=1 NS
	Heterosexual	8	9.3%	9	10.2%	
Frequency of sexual relationship	Every day	23	26.7%	24	27.3%	χ^2=1.14 P=0.78 DF=3 NS
	Once a week	41	47.7%	42	47.7%	
	Two week once	17	19.8%	16	18.2%	
	Monthly once	5	5.8%	6	6.8%	
Method of contraceptive used	Safe period method	11	12.8%	10	11.4%	χ^2=8.26P=0.14 DF=5 NS
	Oral pills	17	19.8%	18	20.4%	
	Condoms	2	2.3%	3	3.4%	
	Copper T	19	22.1%	20	22.7%	
	Permanent method/ tubectomy	34	39.5%	35	39.8%	
	None of the above	3	3.5%	2	2.3%	

Table 1 show that there is similarity in frequency distribution in both study group and control group. The chi square indicated there was no significant dispersion between the group for the all the variable.

First Objective was to determine the effectiveness of Behavior change communication package on RTI symptoms and knowledge regarding reproductive tract infection among married women compared with control group

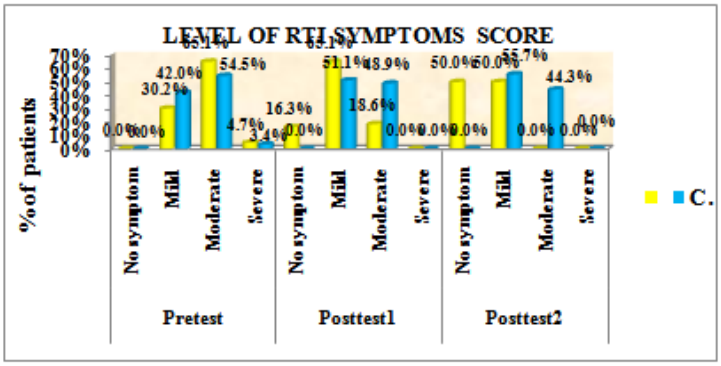

Figure 1: Comparison of RTI Symptoms Among Married Women in the Study Group and Control Group during Pretest, Posttest 1 and Posttest 2

Figure 1 depicts that in pretest, 65.1%(56) in the study group and 54.5%(48) in the control group had moderate symptoms of RTI, 64.7% (4) in study group and 34%(3) in the control group were having sever symptoms of RTI. 4.7% (4) in study group and 3.4 %(3) in control group were having severe symptoms of RTI. During post test 1, none of the group women had severe symptoms of RTI. No symptoms of RTI was observed among 16.3 % (14) married women in the study group. 65.1 % (56) had mild symptoms of RTI in study group and 51.1% (43) in the control group. During post test 2, among study group, women 50% (43) had no symptoms and only 50%(43) exhibited mild symptoms of RTI, but in control group 55.7% hand mild symptoms and 44.3%(39) had moderate symptoms of RTI.

Table 2: Comparison of Pretest, Posttest 1 and Posttest 2 Mean Score of RTI Symptoms Among Married Women between Study Group and Control Group. N=174

Duration of study	Group				Mean Difference	Student independent t-test
	Study(n=86)		Control(n=88)			
	Mean	SD	Mean	SD		
Pretest	31.13	5.00	30.37	4.47	0.76	t=1.08 P=0.28 DF=178 NS
Posttest1	18.19	3.32	28.11	3.53	**9.92**	t=19.42 P=0.001*** DF=178 S
Posttest2	14.77	1.04	27.27	3.56	**12.5**	t=31.98 P=0.001***DF=178S

Not significant P >0.05 * very high significant at P≤0.001**

Table 2 shows, pre test RTI symptoms scores was 31.13 with SD 5 for the study group and 30.32 with SD 4.9 for control group. In the post test 1, RTI symptom mean score was 18.19 with SD of 3.32 among study group and 28.11 with SD of 3.53 in the control group. Highly significant reduction in RTI symptoms was noticed at p<0.001 level. In post test 2, mean score of 14.77 with SD of 1.64 in study group and 27.27 with SD of 3.56 among control group obtained, and the t value was 31.98, which was statistically significant with p<0.001 level. The results are similar to the study done by Sri Devi et al[7] and Nanadan D[8] in Thrirupathi.

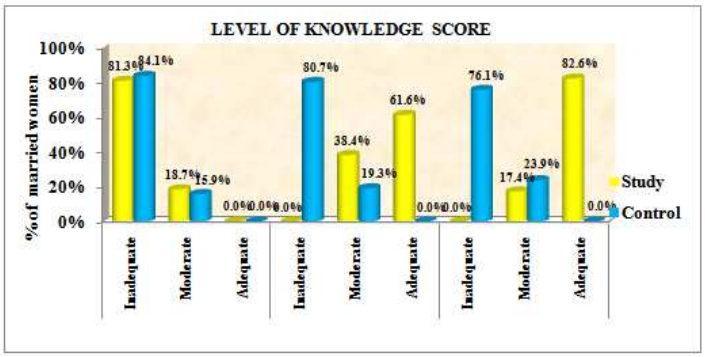

Figure 2: Comparison of Level of Knowledge on RTI among Married Women In The Study Group and Control Group during Pretest, Post test 1 and Post test 2. N=174

Table3. Comparison of Pretest, Posttest 1 and Posttest 2 mean Score of Knowledge on RTI Among Married Women between Study Group and Control Group N=174

Duration of Study	group				Mean Difference	Student independent t-test
	Experiment(n=86)		Control(n=88)			
	Mean	SD	Mean	SD		
Pretest	8.15	2.99	7.58	2.45	0.57	t=1.38P=0.17 NS
Post test1	13.64	2.43	8.18	2.74	5.46	**t=13.89P=0.001*** S**
Post test2	16.35	2.24	8.55	3.02	7.80	**t=19.29P=0.001*** S**

p>0.05 Not significant ***P<0.001 highly significant

Table 3 depicts, the pretest mean knowledge score was 8.15 with SD of 2.99 in the study group and 7.58 with SD

of 2.45 in the control group. During post test 1, the mean score knowledge score was 13.64 with SD of 2.43 in the study group and mean score of 8.15 with SD of 2.74 in the control group. The mean difference was 5.46 with t vale of 13.59, which was highly significant at $p<0.001$ level.

The post test 2 showed a highly significant difference ($t=19.25$, mean difference =2.80) between the groups at $p<0.001$ level. In post test 1 and post test 2, knowledge score of married women in study group showed significant improvement but in control group, there was no much difference. In this study, we found that the knowledge on RTI among women was poor before BCCP; this was supported by study conducted by Rizwan S. A. etal[9] in Haryana. After BCCP, there was significant increase in knowledge, but such change was not observed among control group.

Second Objective was to associate the selected background variable with RTI symptoms and knowledge among married women in study group and control group.

Association between RTI symptoms reduction score with behavior in the study group showed, there is association with younger age, previous knowledge, and monogamy sexual women showed reduction in RTI symptoms at $p <0.001$ level. In the control group, none of the variables were associated with RTI symptoms of Women.

Association between knowledge gain score with selected behavior explicit that elderly women, more educated, more income women were having good knowledge gain score than others in the study group at $p<0.001$ level. In the control group, none of the variables were associated with knowledge level of women.

CONCLUSIONS

Knowledge regarding RTI was found to be poor among women before BCCP intervention (81.5% in study group and 84.1% in control group). After intervention, the knowledge of Study group women was adequate 61.6% in post test 1 and 82.6% in post test2. None of them were having poor knowledge. But in control group, none of them showed adequate level of knowledge. RTI symptoms were moderate and severe among both the groups in study group in pretest. During post test among study group, women showed reduction in RTI symptoms from mild to no symptoms (50%, 50%), but in control group 55.7% had mild and 44.3% had moderate RTI symptoms.

LIMITATIONS

- Even though adequate precautions were taken to ensure privacy and confidentiality, since the topic was sensitive, women may be apprehensive to reveal their problems. Hence, they would hide their RTI symptoms.
- Limited to rural population only.

RECOMENDATATIONS

- This study can be done with large sample, with a comparison between rural and urban population.
- Self reported RTI can be confirmed with clinical and laboratory findings.

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